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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application No.	10/668,798
Filing Date	September 23, 2003
First Named Inventor	Soon Ho Lee
Art Unit	2632
Examiner Name	Travis R. Hunnings
Total Number of Pages in This Submission: 13	Attorney Docket Number: 51876P395

ENCLOSURES *(check all that apply)*

- [X] Fee Transmittal Form
  - [ ] Fee Attached
- [ ] Amendment / Response
  - [ ] After Final
  - [ ] Affidavits/declaration(s)
- [ ] Extension of Time Request
- [ ] Express Abandonment Request
- [ ] Information Disclosure Statement
  - [ ] PTO/SB/08
- [ ] Certified Copy of Priority Document(s)
- [ ] Response to Missing Parts/ Incomplete Application
  - [ ] Basic Filing Fee
  - [ ] Declaration/POA
  - [ ] Response to Missing Parts under 37 CFR 1.52 or 1.53
- [ ] Drawing(s)
- [ ] Licensing-related Papers
- [ ] Petition
- [ ] Petition to Convert a Provisional Application
- [ ] Power of Attorney, Revocation Change of Correspondence Address
- [ ] Terminal Disclaimer
- [ ] Request for Refund
- [ ] CD, Number of CD(s)
  - [ ] Landscape Table on CD
- [ ] After Allowance Communication to TC
- [ ] Appeal Communication to Board of Appeals and Interferences
- [X] Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- [ ] Proprietary Information
- [ ] Status Letter
- [X] Other Enclosure(s) *(please identify below):*

-return receipt postcard

Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Eric S. Hyman, Reg. No. 30,139 BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP
Signature	
Date	July 5, 2006

CERTIFICATE OF MAILING/TRANSMISSION

I hereby certify that this correspondence is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Mail Stop Appeal Brief-Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Typed or printed name	**Amber D. Saunders**		
Signature		Date	**July 5, 2006**

Based on PTO/SB/21 (09-04) as modified by Blakely, Sokoloff, Taylor & Zafman (wlr) 11/30/2005.
SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

FEE TRANSMITTAL for FY 2005

JUL 10 2006 *Patent fees are subject to annual revision.*

☐ Applicant claims small entity status. See 37 CFR 1.27.

TOTAL AMOUNT OF PAYMENT ($) 0.00

Complete if Known	
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METHOD OF PAYMENT *(check all that apply)*

☐ Check ☐ Credit card ☐ Money Order ☒ None ☐ Other (please identify): _____

☒ Deposit Account Deposit Account Number: 02-2666 Deposit Account Name: Blakely, Sokoloff, Taylor & Zafman LLP

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee

☒ Charge any additional fee(s) or underpayment of fee(s) under 37 CFR §§ 1.16, 1.17, 1.18 and 1.20. ☒ Credit any overpayments

FEE CALCULATION

1. EXTRA CLAIM FEES

			Extra Claims		Fee from below		Fee Paid
Total Claims	7	- 20* =	0	x	50.00	=	$0.00
Independent Claims	1	- 4* =	0	x	200.00	=	$0.00
Multiple Dependent						=	

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description
1202	50	2202	25	Claims in excess of 20
1201	200	2201	100	Independent claims in excess of 3
1203	360	2203	180	Multiple Dependent claim, if not paid
1204	790	2204	395	**Reissue independent claims over original patent
1205	300	2205	150	**Reissue claims in excess of 20 and over original patent

***or number previously paid, if greater, For Reissues, see below*

SUBTOTAL (1) ($) 0.00

2. ADDITIONAL FEES

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet.	
2053	130	2053	130	Non-English specification	
1251	120	2251	60	Extension for reply within first month	
1252	450	2252	225	Extension for reply within second month	
1253	1,020	2253	510	Extension for reply within third month	
1254	1,590	2254	795	Extension for reply within fourth month	
1255	2,160	2255	1,080	Extension for reply within fifth month	
1401	500	2401	250	Notice of Appeal	
1402	500	2402	250	Filing a brief in support of an appeal	
1403	1,000	2403	500	Request for oral hearing	
1451	1,510	2451	1,510	Petition to institute a public use proceeding	
1460	130	2460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
1809	790	1809	395	Filing a submission after final rejection (37 CFR § 1.129(a))	
1810	790	2810	395	For each additional invention to be examined (37 CFR § 1.129(b))	
Other fee (specify)					

SUBTOTAL (2) ($)

SUBMITTED BY Complete (if applicable)

Name (Print/Type)	Eric S. Hyman	Registration No. (Attorney/Agent)	30,139	Telephone	(310) 207-3800
Signature				Date	07/05/06

Based on PTO/SB/17 (12-04) as modified by Blakely, Sokoloff, Taylor & Zafman (wlr) 12/15/2004.
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Docket No.: 051876P395

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Soon Ho Lee

Application No.: 10/668,798

Filed: September 23, 2003

For: **METHOD FOR PROVIDING BUS ARRIVAL TIME FOR PASSENGERS BY USING DSRC**

Art Group: 2632

Examiner: Travis R. Hunnings

Assistant Commissioner for Patents
Board of Patent Appeals and Interferences
P.O. Box 1450
Alexandria, VA 22313-1450

REPLY BRIEF

Pursuant to 37 C.F.R. § 41.41, Appellant submits the following Reply Brief for consideration by the Board of Patent Appeals and Interferences ("Board"). The Reply Brief does not include any new amendment, new affidavits, or new evidence. Additionally, Appellant does not request an oral hearing. Please charge any additional amounts due or credit any overpayment to Deposit Account No. 02-2666.

TABLE OF CONTENTS

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I. STATUS OF CLAIMS

Claims 1, 4, 5, and 11-14 are pending in the application, all of which have been rejected. Appellant appeals the rejection of Claims 1, 4, 5, and 11-14.

An Appeal Brief was filed on November 28, 2005. The Examiner issued an Examiner's Answer on May 18, 2006 to maintain the rejection. No new grounds for rejection are identified in the Examiner's Answer.

II. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The issue involved in this Appeal is as follows:

A. Are Claims 1, 4, 5, 11, and 12 unpatentable under 35 U.S.C. §103(a) for being obvious over U.S. Patent No. 5,739,774 issued to Olandesi ("Olandesi") in view of U.S. Patent No. 6,006,159 issued to Schmier et al ("Schmier") and further in view of Japanese Patent No. JP354082584 issued to Fujimoto ("Fujimoto")?

B. Are Claims 13 and 14 unpatentable under 35 U.S.C. §103(a) for being obvious over Olandesi in view of Schmier further in view of Fujimoto and further in view of U.S. Patent No. 6,803,862 issued to O'Connor et al ("O'Connor")?

III. ARGUMENT

The Examiner has rejected Claims 1, 4, 5, 11, and 12 as unpatentable under 35 U.S.C. §103(a) over Olandesi in view of Schmier and further in view of Fujimoto.

The Examiner has rejected Claims 13 and 14 as unpatentable under 35 U.S.C. §103(a) over Olandesi in view of Schmier and further in view of Fujimoto and further in view of O'Connor.

All of the claims do not stand or fall together. The basis for the separate patentability of the claims has been discussed in detail in the Appeal Brief filed on November 28, 2005. This Reply Brief responds to the Examiner's Answer, in particular, at pages 10-14 under section (10) "Response to Argument."

Response to the Examiner's Answer

In the Appeal Brief with respect to Claim 1, Appellant submits that Fujimoto does not disclose a two-step process as recited in steps (c) and (d) of Claim 1; namely, first computing a computed traffic speed, and then computing an average traffic speed using the computed traffic speed (Appeal Brief at page 9). At page 12 of the Examiner's Answer to the Appeal Brief, the Examiner indicates that the system disclosed by Fujimoto clearly computes an "average speed" by computing the traffic speed between two receivers. Thus, according to the Examiner, the term "average speed" means an average of the speed between the two receivers.

Further, the Examiner indicates that the system of Fujimoto also determines the estimated hourly speed ahead of the bus, and therefore "it would have been obvious to one of ordinary skill in the art to use the 'average speed' of busses passing through the section ahead of the bus previously to calculate an average speed to provide the function of providing future estimated arrival times."

Appellant submits that the claimed method computes traffic speeds of each section between roadside base stations and computes average traffic speeds of each section between roadside base stations. The average traffic speed of each section is computed by using the computed traffic speeds of each section. The claimed method also computes the time required for arriving at next bus stops from a roadside base station based on the computed average traffic speeds of each section. By performing the computations, the claimed method provides bus passengers with a time table through the roadside base station passed by the bus. The time table

includes the time required for arriving at each bus stop from the roadside base station. Thus, the provided time table reflects the real time traffic conditions.

More specifically, the bus information server disclosed in the claimed method computes average traffic speeds of each section between bus stops based on received information from the roadside base stations and previously computed traffic speeds. As recited in Claim 12, the previously computed traffic speeds are stored in a database. After computing the average traffic speeds, the bus information server computes the times required for arriving at each bus stop from the roadside base station. The computed times required for arriving at each bus stop from the roadside base station is transmitted to the corresponding roadside base station. The roadside base station transmits corresponding data table containing the expected times for traveling sections to the on-board device when the bus passes the roadside base station. The on-board device displays information received from the roadside base station for the bus passengers to provide the time required for arriving at each bus stop from the roadside base station.

By contrast, Fujimoto's system is designed to keep a predetermined interval between the running buses. The bus operating system disclosed by Fujimoto computes merely the time for a bus to arrive at a predetermined station in front of the bus, using the average passing speed of the bus between two ground receivers and a stored estimated speed.

Assuming that Fujimoto's "average passing speed" corresponds to the claimed "traffic speed," Fujimoto fails to teach, or even suggest, a process for computing the claimed average traffic speed. The claimed average traffic speed requires an additional averaging operation which is not disclosed in the cited references. The additional averaging operation is based on the traffic/passing speed accumulated over time. Thus, the claimed "average traffic speed" may be viewed as a time average of the "average passing speed" disclosed by Fujimoto.

For the foregoing reasons and the discussions of records, Appellant respectfully submits each of the pending claims is separately patentable over the cited references.

Accordingly, it is submitted that the rejections of Claims 1, 4, 5, and 11-14 based on 35 U.S.C. §103 be overturned.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN

Dated: July 5, 2005

Eric S. Hyman, Reg. No. 30,139

12400 Wilshire Blvd.
Seventh Floor
Los Angeles, California 90025
(310) 207-3800

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Amber Saunders 7/5/06

Amber Saunders Date

IV. CLAIMS APPENDIX

The claims involved in this Appeal are as follows:

1. (Previously Amended) A method for providing an expected arrival time of bus stops for a traffic information system, wherein the traffic information system includes an on-board device, a plurality of roadside base stations and a bus information server, the method comprising the steps of:

a) at one of the roadside base stations which are installed at side of roadway between the bus stops, receiving an on-board device ID from the on-board device in a bus, when the bus equipping the on-board device passes the roadside base station without stopping;

b) at the roadside base station, transmitting traffic information including the on-board device ID, a roadside base station ID and a pass time to the bus information server;

c) at the bus information server, computing a traffic speed of each section between the roadside base stations using the traffic information;

d) at the bus information server, computing an average traffic speed of each section between the roadside base stations using the computed traffic speed of each section;

e) at the bus information server, computing time required for arriving at next bus stops from the roadside base station based on the computed average traffic speed of each section;

f) at the bus information server, transmitting the computed time required for arriving at each of the next bus stops from the corresponding roadside base station;

g) at the roadside base station, transmitting the computed time required for arriving at each of the next bus stops to the on-board device when the roadside base station receives the on-board device ID; and

h) at the on-board device, announcing the expected arrival time of each of the next bus stops based on the computed time required for arriving through an output device.

2-3. (Canceled)

4. (Previously Presented) The method as recited in the claim 1, wherein the bus information server, the roadside base station and the on-board device determine a bus course based on an on-board device group ID.

5. (Previously Presented) The method as recited in the claim 1, wherein the bus stops are major bus stops.

6-10. (Canceled)

11. (Previously Presented) The method as recited in claim 1, wherein in the step c), the bus information server stores the computed traffic speed of each section to a section speed_DB.

12. (Previously Presented) The method as recited in claim 11, wherein in the step d), the bus information server updates the average traffic speed of each section based on the computed traffic speed of each section previously stored in the section speed_DB.

13. (Previously Presented) The method as recited in claim 12, wherein the step e) includes the steps of:

e1) reading a bus stop_DB stored in the bus information server as a form of a table containing a bus stop list according to bus courses passing the roadside base station;

e2) computing the time required for arriving at each of the bus stops based on the table of the bus stop_DB; and

e3) storing the computed time for arriving at each of the bus stops in a requirement time_DB as a form of a table.

14. (Previously Presented) The method as recited in claim 13, wherein in the step f), the bus information server transmits the table of the requirement time_DB and an on-board device group ID to the corresponding roadside base station.